

EXHIBIT 7

From: rameshp@cisco.com (Ramesh PVN)
Subject: Updated Dot1x Cli - Request for review
Received(Date): 24 May 2001 01:23:23 -0700

Hi Parse Police,

Here is the list of updated dot1x CLI commands. Pls go through and make ur comments.

Commands at the config-if mode (interface specific config commands)

[no] dot1x port-control <port-control-value>

[no] dot1x multiple-hosts

Commands at the exec mode

dot1x initialize <interface>

dot1x re-authenticate <interface>

Commands at the config-terminal mode

[no] dot1x system-auth-control

[no] dot1x timeout quiet-period <seconds>

[no] dot1x timeout tx-period <seconds>

[no] dot1x timeout supp-timeout <seconds>

[no] dot1x timeout server-timeout <seconds>

[no] dot1x max-req <count>

[no] dot1x timeout re-authperiod <seconds>

[no] dot1x re-authentication

Show Commands

show dot1x

show dot1x <interface>

show dot1x statistics <interface>

Debug Commands

[no] debug dot1x errors

[no] debug dot1x events

[no] debug dot1x state-machine

[no] debug dot1x packets

[no] debug dot1x registries

[no] debug dot1x all

[no] dot1x port-control <port-control-value>

The user can set port control to either "Force Authorized", "Force unAuthorized" or Auto. This command enables manual control of the authorization state of the controlled port.

A no prefix sets the port-control to force-authorized

Force Authorized :- Causes controlled port to transition to authorized state unconditionally. In this state the port allows normal traffic without 802.1x based authorization of supplicant. This is equal to disabling 802.1x feature on the port.

Force UnAuthorized :- Forces the controlled port to transit to unauthorized state unconditionally. This prevents the authorized services of the authenticator to the supplicant.

Auto :- This allows the controlled port to transit to authorized or unauthorized state based on 802.1x based authentication between the authenticator and the supplicant. If the authenticator PAE port control is programmed to be auto, the port cannot be configured to participate in Dvlan, cannot be configured as a trunk port, and port security feature cannot be turned on. If any of these features is turned on, the port control cannot be programmed to auto. Setting port control value to

auto is equalent to enabling 802.1x control on the port.
The port-control value is set to "Force Authorized" by default.

[no] dot1x multiple-hosts

This command is used to allow or disallow multiple hosts on a dot1x port. By default multiple hosts option is disabled. The `no` prefix disables the multi-hosts option.

dot1x initialize

This command causes the initialization of the port with respect to dot1x feature. The state machines are initialized and the port status becomes unauthorized. This command can be used by the user to initialize state machines when he wants to set up the environment for fresh authentication.

dot1x re-authenticate

This command manually initiates a re-authentication of the supplicant that is connected to the port. This command can be used to re-authenticate without waiting for automatic re-authentication after re-authperiod.

[no] dot1x system-auth-control

This command is used to enable or disable authentication for system as a whole. This is set to enable by default. As the port-control value is force-authorized by default, this facilitates the user to modify port-control value alone to auto to turn on 802.1x for that port.
Enable :- Each port's authorization status is controlled in accordance with the value of port's port-control parameter.
Disable :- All ports behave as though their port-control parameter is set to force-authorized. The `no` prefix configures it to disable

[no] dot1x timeout quiet-period <seconds>

If the authenticator is not able to successfully authenticate the supplicant, then it keeps idle for sometime and then again tries to authenticate. This idle time is called quiet -period. The no prefix configures it to the default value which is 60 seconds. However the configurable value is between 0-65535 seconds. The user can change the value of quiet-period using this command.

[no] dot1x timeout tx-period <seconds>

This is the time constant for re-transmission of EAP - Request/Identify frame by authenticator to the supplicant. The no prefix configures it to the default value which is 30 seconds. However configurable value is in the range of 1 to 65535 seconds. The user can change the value of tx-period using this command.

[no] dot1x timeout supp-timeout <seconds>

This is the time constant for retransmission of EAP request frames by the Backend Authenticator to the supplicant. The no prefix configures it to the default value which is 30 seconds. The user can change the value of suppTimeout using this command.

[no] dot1x timeout server-timeout <seconds>

This is the time for retransmission of frames by Backend Authenticator to the Authentication server. The no prefix configures it to the default value which is 30 seconds. The user can change the value of

serverTimeout using this command.

[no] dot1x timeout re-authperiod <seconds>

This is the time for re-authenticating the supplicant. The no prefix configures it to the default value which is 3600 seconds.. The user can change the value of reAuthperiod using this command.

[no] dot1x max-req <count>

This is the number of frame retransmissions by the Backend Authenticator to the supplicant. The no prefix configures it to the default value which is 2. However the configurable range varies from 1 to 10. The user can change the value of max-req using this command.

[no] dot1x re-authentication

The authenticator does a re-authentication of the supplicant once in every reAuthperiod if re-authentication is enabled. Else, it does not re-authenticate after the supplicant is authenticated once. The user can enable or disable re-authentication using this command. The no prefix disables reauthentication

dot1x default

This command can be used by the user to configure the dot1x 'config' parameters associated with the system to default values given by 802.1x/D9.

show dot1x <interface>

This command displays all the configurable and current state parametric values associated with the authenticator PAE and Backend Authenticator. It displays the values of Authstate, BackendState, port-control, port-status, multiple-hosts values which are port specific along with the system wide configurable values like quiet-period, tx-period, supp-timeout, server-timeout, max-req, re-authperiod, re-authentication.

show dot1x statistics <interface>

This command displays the statistics of different types of EAP frames that are transmitted and received by the authenticator on a specific port.

show dot1x

This command displays the port capabilities and protocol version of the system.

[no] debug dot1x errors

All the print statements with error flag set are printed.

[no] debug dot1x events

All the print statements with events flag set are printed.

[no] debug dot1x state-machines

All the print statements related to both dot1x state-machines printed.

[no] debug dot1x registries

All the print statements with registries flag set are printed.

[no] debug dot1x packets

All the incoming packets with packet info and interface info are

printed.

[no] dot1x debug all

All the above 5 debug flags will be set and all the print statements will be printed